Amendments to the Specification:

Please insert the following paragraph at page 3, between lines 6 and 7:

Another problem associated with gas turbine engines is inlet fogging or water injection. This addition of water to the inlet of the turbine increases the output power/thermal efficiency of the turbine. This technique not only increases maneuverability of the gas turbine during part load operation, but also decreases the exhaust gas emissions of CO and unburned hydrocarbons by at least half. Fuel efficiency increases can be realized with the use of inlet fogging or water injection. However, water injection and inlet fogging causes airfoil leading edge cavitation erosion. This cavitation erosion results in surface roughening and/or pitting. Fatigue strength capability reductions occur as a result of this roughening and/or pitting, making the affected airfoils susceptible to fatigue cracking and subsequent air foil liberation resulting in significant damage to the gas turbine.

Please replace the paragraph beginning at page 3, line 14, with the following rewritten paragraph:

As one skilled in this art will appreciate, the cold working of airfoil surfaces and the like are well known techniques for

imparting a tensile strength to resist cracking. A good understanding of tensile stress may be had by referring to United States Patent No. 6,622,570 granted to Prevey, III on September 23, 2003 that teaches the cold working of airfoils by a burnishing operation. ~~As is astutely pointed out in this reference,~~ It is Prevey's opinion that shot ~~peeing~~ peening is an unacceptable technique for airfoils where a greater depth of compressive stress penetration is required or for parts that require localized or well defined compressive stress regions. However, if a great depth of compressive stress penetration is not required then shot peening is acceptable.

Please replace the paragraph beginning at page 11, line 1, with the following rewritten paragraph:

The repair method in accordance with this invention starts with the steps of cleaning, and inspecting so that all cracking or indications [[form]] found during non-destructive inspection techniques are removed. The inspection techniques can include any of the following well known techniques such as, visual, ~~flororescent penetrans~~ fluorescent penetrant inspection (FPI) according to the standards of ASTM E 1417(type 1, method A to a sensitivity level 4 form a), X-ray, mag particle inspection (MPI),

Eddy current or other appropriate techniques. Hence, the repair method will include the following steps prior to imparting the residual compressive stress, clean/de-grease, inspection - visual, inspection - FPI, and clean/de-grease. The blending or deburring is done by suitable abrasive and rotary tools, such as flapper wheels, abrasive wheels, Cratex Wheels or cloth. Tumbling can be utilized in cases where only minor indications need to be removed.

Please replace the paragraph beginning at page 12, line 7, with the following rewritten paragraph:

In the repair treatment of the compressor blade 10, the [[level]] depth and magnitude of the residual compressive stresses for the airfoil portion of the blade is different from the [[level]] depth and magnitude of the residual compressive stresses of the attachment section. In the airfoil, the residual compressive stresses are imparted by a ceramic shot peening technique where the selective portions of the airfoil section is ~~ceramic bead~~ peened according to ~~AMS2430 using SAE AZB300-AZB425 (substantially 0.012 to 0.024 inch(") to an intensity of 10N~~ AMS 2430 process using ceramic beads which are sized in the range of 0.012 to 0.024 inches. These selected portions are peened to an intensity of 10N. The intensity is measured utilizing Almen test strips "N", "A", and

"C" as specified in the AMS 2430 process. The process defines the peening intensity as including a numeric value designating the minimum arc height or arc height range in thousandths of an inch in a standard gage length on a test strip totally peened across the width and end to end on one side and a letter designating the type of test strip. For example, "Intensity 10A" indicates an arc height of 0.010 inch on an "A" test strip, measured on the standard gage. If it is desired to specify a tolerance on peening intensity or a basic intensity other than as above, this may be done by specifying either a range of intensity of a basic intensity with a tolerance; thus, an intensity of either 12 to 15N or 12N -), +3, denotes an arc height of 0.012 to 0.015 inch on the "N" test strip. Although absolute stress pressures are not utilized in this process, the stresses of the process can be compared to one another utilizing a standard unit of measure. The leading edge 14 and the trailing edge 16 are peened such that the peening fades from a distance of 0.187" to 0.25" from the leading edge 14 and the trailing edge 16 to an intensity of ~~5-8N~~ 5N to 8N on the leading edge 14 and to an intensity of 5N or less on the trailing edge 16.

Please replace the paragraph beginning at page 15, line 15, with the following rewritten paragraph:

This portion of the specification deals with the method of protecting new parts and the blade depicted in Fig. 1 is utilized for this description. As noted the airfoil section after the manufactured blade is readied to be treated and is cleaned in a suitable manner, selected surfaces of the airfoil [[is]] are cold worked so as to obtain the desired residual compressive stress, [[say]] between [[5n]] 5N to [[20n]] 20N, which approximates the proportional limit of the material of the blade or component. Cold working may be done by any suitable peening process, such as shot peening, ceramic peening, glass bead peening, water jet peening and laser shock peening. The trailing edge is masked during this operation to ~~avoid imparting~~ reduce the depth of residual compressive stress to this portion of the airfoil. The next step in the method is the coating operation and again the part is cleaned and again masked so as to coat only the airfoil portion of the blade. [[and it]] It is then inserted into a cathodic arc vacuum chamber that is at a very low pressure and filled with argon or other non-toxic gas. The chamber is selectively filled with controlled quantities of nitrogen which reacts with the titanium exuded from the titanium electrode of the chamber. The process is done at a relatively low temperature say from 300 degrees Fahrenheit to 350 degrees Fahrenheit, in contrast to heretofore

method that process the coating in much higher temperatures. In this manner only the airfoil is coated and by reducing and raising the quantity of nitrogen the hardness of the layers of coating are at different levels. The part is then inspected to assure the coating does not exceed a certain thickness so as to assure that the aerodynamics of the blade.